

REMARKS

The Applicants thank the Examiner for the consideration shown to the present application. Claims 1-5, 7-12 and 38-41 are pending.

Traversal of Prior Art Rejections

Section 103 Rejection Over Seiden:

Claims 1-5 and 7-12 are rejected as being obvious under 35 USC 103(a) over U.S. Patent No. 4,680,184 to Seiden et al. (hereafter "Seiden"). At page 2 of the Action, the Examiner asserts that Seiden discloses emulsifier compositions that contain (i) 0-60% fatty acid esters of polyols (the Examiner characterizes PGEs as being within this polyol description by Seiden), (ii) fatty acid mono-diglyceride and (iii) fatty acid monoglyceride esters of polycarboxylic acids. (Applicants note that component (iii) (monoglyceride esters of polycarboxylic acids) is actually mentioned by Seiden et al. as an optional ingredient.) The Examiner admits that Seiden does not teach claimed amount of polyglycerol ester, but asserts that absent a showing of unexpected results such a limitation would be obvious to a skilled artisan.

With respect to the mono-diglyceride component, Seiden provides that this material is included in an amount of from about 40 to about 100% by weight. (See Summary of the Invention at Col. 2.) At Col. 4, lines 21-25, Seiden provides that it is preferred that the described emulsifier compositions comprise from about 50 to 100%, more preferably from about 70 to 100%, mono-diglyceride. In contrast, Applicants' amended Claim 1 now provides that the emulsifier system comprises 70-100% of the polyglycerol ester (PGE) material(s). Clearly, if any mono-diglyceride were included in Applicants' emulsifier system, it would only be at a level up to 30%, which is well below the teaching of Seiden. Applicants respectfully submit that Seiden does not describe Applicants' high PGE-content emulsifier systems. Moreover, Seiden does not suggest that such systems would provide beneficial properties, particularly when one considers that Seiden prefers much higher mono-diglyceride content and, therefore, much lower polyglycerol ester content.

Withdrawal of the anticipation rejection over Seiden is respectfully requested.

Section 102 and 103 Rejections Over Gruning:

Claims 1, 38 and 40 are rejected as being anticipated under 35 USC 102(e) by U.S. Patent No. 6,242,499 to Gruning et al. (hereafter "Gruning"). Claims 39 and 41 are rejected as being obvious under 35 USC 103(a) over Gruning.

The Examiner asserts that Gruning describes polyglycerol ester emulsifiers that read on Applicants' claims. The Examiner specifically asserts that Gruning teaches esters obtained by

esterification of a polyglycerol mixture with fatty acids having from 12-22 carbons, and that the degree of esterification is between 30 and 75%. The Examiner further asserts that Gruning teaches polyglycerol esters where the backbone of the polyglycerol has oligomer distribution overlapping with that claimed by Applicants.

The crux of the Gruning reference is the use of polyfunctional carboxylic acids to form polyglycerol esters that are improved water-in-oil ("W/O") emulsifiers. At the paragraph spanning Columns 1 and 2, Gruning et al. state that

[i]t was an object of the invention to provide novel polyglycerol esters which can be prepared from nature materials and, compared with polyglycerol polyhydroxystearate exhibit the additional advantage of improved stability, in particular higher freeze-thaw stability, of the W/O emulsions prepared therewith.

Extended storage at very low temperatures or extreme temperature changes during relatively long transport distances can cause the inadequate emulsion stability to become apparent..., or even can result in complete emulsion break-down, which is avoided by the novel solution to the-object [sic].

In the Field of the Invention section, Gruning indicates that the emulsifiers described are useful in the cosmetic, pharmaceutical and micropigments fields.

In contrast, Applicants have amended Claim 1 to describe the fatty acid(s) used in forming the claimed PGEs. Specifically, Claim 1 now provides that the fatty acids are selected from oleic acid, palmitic acid, stearic acid, intermediate melting fatty acids, and mixtures thereof. Thus, the claims do not encompass the polyfunctional carboxylic acid containing polyglycerols described by Gruning.

Applicants submit that the claims do not encompass the emulsifier compositions described by Gruning et al. Withdrawal of the rejections based on Gruning is requested.

CONCLUSION

Based on the arguments made herein, Applicants submit that the rejections over the Seiden and Gruning references should be withdrawn. Allowance is respectfully requested.

Respectfully submitted,



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